Product Brief

MegaRAID® SAS 9280-8e / MegaRAID SAS 9280DE-8e

Eight-Port 6Gb/s PCI Express SATA and SAS RAID Controller

KEY FEATURES

- Eight external 6Gb/s SATA+SAS ports
- Two Mini-SAS external connectors (SFF-8088)
- LSISAS2108 6Gb/s RAID-on-Chip - 800MHz PowerPC®
- 512MB 800MHz DDRII cache memory
- Optional battery backup module
- RAID Levels 0, 1, 5, and 6
- RAID Spans 10, 50, and 60

KEY ADVANTAGES

- Superior Performance
  - Maximum Reads: 2,875MB/s
  - Maximum Writes: 1,800MB/s
- PCI Express® 2.0 provides faster signaling for high-bandwidth applications
- Support for 3Gb/s and 6Gb/s SATA and SAS hard drives and SSDs
- SafeStore™ Encryption Services for more secure data protection

TYPICAL APPLICATIONS

- Video-On-Demand
- Video-Surveillance
- Video Creation + Editing
- Medical Imaging
- High-Performance Computing
- Digital Content Archive and VTL
- Storage Appliance
- File, Web, Database, and Email Servers

Protect Business Critical Data with the Industry's Most Trusted SATA+SAS RAID Controllers

Next-Generation SATA+SAS RAID for External Enclosures

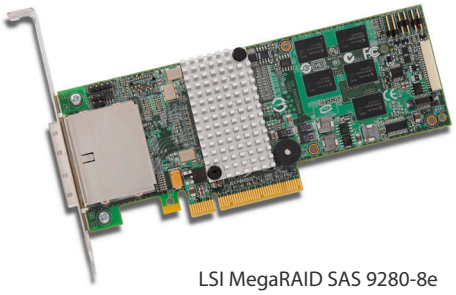
Today's newest external enclosure designs are based on architectures that support both SATA and SAS drives. The MegaRAID SAS 9280-8e and 9280DE-8e, with eight external SATA+SAS ports, are ideal for configuring these external enclosures with your choice of high-performance SAS hard drives, high-capacity SATA hard drives or power-saving solid state drives (SSDs). With data transfer rates of up to 6Gb/s per port, the MegaRAID SAS 9280-8e and 9280DE-8e bring users new features and improved performance, while continuing to support all the features of the previous 3Gb/s SATA+SAS generation. These feature line controllers employ the latest in RAID-on-Chip technology, comply with the PCI Express 2.0 specification and provide additional data security using LSI™ SafeStore encryption services.

6Gb/s SAS Performance Advantage

6Gb/s SAS is designed for backward compatibility with 3Gb/s SAS as well as with 6Gb/s and 3Gb/s SATA hard drives. Regardless of the drive speed, 6Gb/s MegaRAID controllers will deliver significant performance improvements in both read and write applications as compared to their 3Gb/s predecessors. Other new features to the 6Gb/s MegaRAID SATA+SAS controllers include greater signal integrity using Decision Feedback Equalization, support for more sophisticated SAS topologies using Expander Self-discovery/Self-configuration, and additional safeguards to enhance data protection.

LSI SafeStore Encryption Services

LSI is pleased to offer SafeStore encryption services, which offer instant secure erase and local key management* for self-encrypting drives (SEDs). This technology represents a significant step forward in securing a drive's data from any unauthorized access or modification resulting from theft, loss, or repurposing of drives. Instant secure erase cryptographically erases an SED, whether it is 73GB or 1TB, in less than a second. This allows for secure drive returns or reuse. SafeStore local key management provides the necessary management and protection of SEDs using a simple pass phrase, security key identifier, and security key file, which can be set and applied to all SEDs assigned to a MegaRAID adapter. This removes the complexity of managing each SED's unique encryption key, and essentially relieves the administrator from most of the daily tasks of securing data.



LSI MegaRAID SAS 9280-8e

*local key management is supported only with the 9280DE-8e

Intuitive RAID Management Utility

The MegaRAID Management Suite™ provides the essential software tools to efficiently manage MegaRAID products, whether deployed in an enterprise or small business. LSI offers a collection of applications and tools including a pre-boot setup utility and a full spectrum of online RAID management utilities. This suite of applications allow administrators to adjust SAS topology views from the system host, controller and disk enclosure down to the logical and physical drive level. Extending to enterprise deployments, these tools scale to easily configure, monitor and manage RAID volumes locally or over the LAN network.

MEGARAID SAS 9280-8E / MEGARAID SAS 9280DE-8E	
Solution Provided	Eight-port external SATA+SAS RAID solution for servers requiring the scalability and flexibility to use up to 240 SATA or SAS hard drives or SSDs in external storage environments.
Physical Dimensions	MD2 Low profile (6.6" X 2.536")
Connectors	Two Mini-SAS SFF-8088 external connectors
Device Support	Up to 240 SATA and/or SAS hard drives and SSDs
Host Bus Type	x8 lane PCI Express 2.0 Compliant
Data Transfer Rates	Up to 6Gb/s per port
I/O Processor/SAS Controller	LSISAS2108 RAID-on-Chip (ROC)
Cache Memory	512MB 800MHz DDR II SDRAM
Battery Backup Unit	LSIiBBU07, an intelligent battery backup module option that directly connects to the adapter
Key RAID Data Protection Features	• RAID levels 0, 1, 5, and 6 • RAID spans 10, 50 and 60 • Online Capacity Expansion (OCE) • Online RAID Level Migration (RLM) • Auto resume after loss of system power during array rebuild or reconstruction (RLM) • Single controller Multipathing (failover) • Load Balancing • Configurable stripe size up to 1MB • Fast initialization for quick array setup • Check Consistency for background data integrity • SafeStore Encryption Services – Instant Secure Erase – Local Key Management* • SSD Support with SSD Guard™ • Patrol read for media scanning and repairing • 64 logical drive support • Up to 64TB LUN support • DDF compliant Configuration on Disk (COD) • S.M.A.R.T support • Global and dedicated Hot Spare with Revertible Hot Spare support – Automatic rebuild – Enclosure affinity – Emergency SATA hot spare for SAS arrays • Enclosure management – SES (inband) – SGPIO (sideband)
Operating Temperature	Maximum ambient: 60°C (44.5°C w/iBBU)
Operating Voltage	+3.3V
Warranty	3 years, free advanced technical support, advanced replacement option
Regulatory Certifications	EN55022, EN55024, EN60950, EN 61000-3-2, EN 61000-3-3; FCC Class A, Class B; UL1950; UL; CSA C22.2; VCCI; RRL for MIC; BSMI; C-tick
RAID Management	MegaRAID Management Suite - MegaRAID Storage Manager™ - MegaCLI (command-line interface) - WebBIOS
OS Support	Extensive support includes Microsoft® Windows® Vista/Server 2003/2000/XP, Linux® and more. Visit the LSI download Center for the most complete list of supported operating systems: lsi.com/support

*local key management is supported only with the 9280DE-8e

For more information and sales office locations, please visit the LSI web sites at:
lsi.com lsichannelgateway.com

LSI, LSI and Design logo, MegaRAID, SafeStore, SSD Guard, MegaRAID Management Suite, and MegaRAID Storage Manager are trademarks or registered trademarks of LSI Corporation. All other brand and product names may be trademarks of their respective companies.

LSI Corporation reserves the right to make changes to any products and services herein at any time without notice. LSI does not assume any responsibility or liability arising out of the application or use of any product or service described herein, except as expressly agreed to in writing by LSI; nor does the purchase, lease, or use of a product or service from LSI convey a license under any patent rights, copyrights, trademark rights, or any other of the intellectual property rights of LSI or of third parties.

Copyright ©2009 by LSI Corporation. All rights reserved.
July 2009